

WHAT IS CLAIMED IS:

1. An article of footwear comprising:
 - a first rigid energy return plate;
 - a second rigid energy return plate independent from the first rigid plate and spaced a predetermined distance from the first rigid plate;
 - a first elastomeric separating element connecting the first and second plates forward of an area of the footwear corresponding to the ball of the foot;
 - a second elastomeric separating element connecting the first and second plates behind the area corresponding to the ball of the foot and forward of an area corresponding to the heel;
 - said first and second plates deflecting when loaded during a phase of gait cycle, storing energy and returning to a non-deflected state, releasing energy, propelling a wearer at a subsequent phase of the gait cycle.
2. The article of footwear of Claim 1, wherein said first and second plates comprise a material having a modulus of elasticity of at least approximately 10×10^6 lb/in².

3. The article of footwear of Claim 2, wherein said elastomeric separating elements comprise a material having a tensile strength at least 2000 psi.

4. The article of footwear of Claim 1, further comprising a hollow space without separating elements between the first and second plates in the area corresponding to the ball of the foot.

5. The article of footwear of Claim 1, wherein said first one of said separating elements is generally arcuate.

6. The article of footwear of Claim 1, wherein each of said first and second rigid plates extends substantially the entire length of a foot.

7. The article of footwear of Claim 1, wherein each of said first and second rigid plates extends only a portion of the length of a foot.

8. The article of footwear of Claim 7, wherein each of said first and second rigid plates extends from a toe area of the foot to an arch area of the foot.

9. The article of footwear of Claim 1, wherein the separating elements allow the first and second plates to move with respect to one another in a medial lateral direction.

10. The article of footwear of Claim 1, wherein the separating elements allow the first and second plates to rotate with respect to one another in a torsional direction.

11. An article of footwear comprising:

a first energy return plate formed of a rigid material having a modulus of elasticity of about 10×10^6 psi to about 100×10^6 psi;

a second energy return plate independent from the first rigid plate, the second energy return plate formed of a rigid material having a modulus of elasticity of about 12×10^6 psi to about 100×10^6 psi; and

first and second elastomeric separating elements connecting the first and second plates, the elastomeric separating elements having a tensile strength of about 2000 to about 6000 psi, and wherein the first and second elastomeric separating elements are positioned to form a void between the first and second plates and the first and second elastomeric separating elements allowing the first and second plates to move with respect to one another in a plurality of dimensions.

12. The article of footwear of Claim 11, wherein the void is a hollow space without any interconnection between the first and second plates in the area corresponding to the ball of the foot.

13. The article of footwear of Claim 11, wherein said first one of said separating elements is generally arcuate.

14. The article of footwear of Claim 11, wherein each of said first and second rigid plates extends substantially the entire length of a foot.

15. The article of footwear of Claim 11, wherein each of said first and second rigid plates extends only a portion of the length of a foot.

16. The article of footwear of Claim 15, wherein each of said first and second rigid plates extends from a toe area of the foot to an arch area of the foot.

17. The article of footwear of Claim 11, wherein the separating elements allow the first and second plates to move with respect to one another in a medial lateral direction.

18. The article of footwear of Claim 11, wherein the separating elements allow the first and second plates to rotate with respect to one another in a torsional direction.

19. An article of footwear comprising:

a first rigid energy return plate extending from a toe area of the foot and terminating at an arch area of the foot;

a second rigid energy return plate independent from the first rigid plate and spaced a predetermined distance from the first rigid plate, the second rigid energy return plate extending from the toe area of the foot and terminating at the arch area of the foot;

a first elastomeric separating element connecting the first and second plates forward of an area of the footwear corresponding to the ball of the foot; and

a second elastomeric separating element connecting the first and second plates behind the area corresponding to the ball of the foot and forward of an area corresponding to the heel, said first and second plates deflecting when loaded during a phase of gait cycle, storing energy and returning to a non-deflected state, releasing energy, propelling a wearer at a subsequent phase of the gait cycle.

20. The article of footwear of Claim 19, wherein said first and second plates comprise a material having a modulus of elasticity of at least approximately 10×10^6 lb/in².

21. The article of footwear of Claim 19, wherein said elastomeric separating elements comprise a material having a tensile strength at least 2000 psi.

22. The article of footwear of Claim 19, further comprising a hollow space without separating elements between the first and second plates in the area corresponding to the ball of the foot.

23. The article of footwear of Claim 19, wherein said first one of said separating elements is generally arcuate.

24. The article of footwear of Claim 19, wherein the separating elements allow the first and second plates to move with respect to one another in a medial lateral direction.

25. The article of footwear of Claim 19, wherein the separating elements allow the first and second plates to rotate with respect to one another in a torsional direction.